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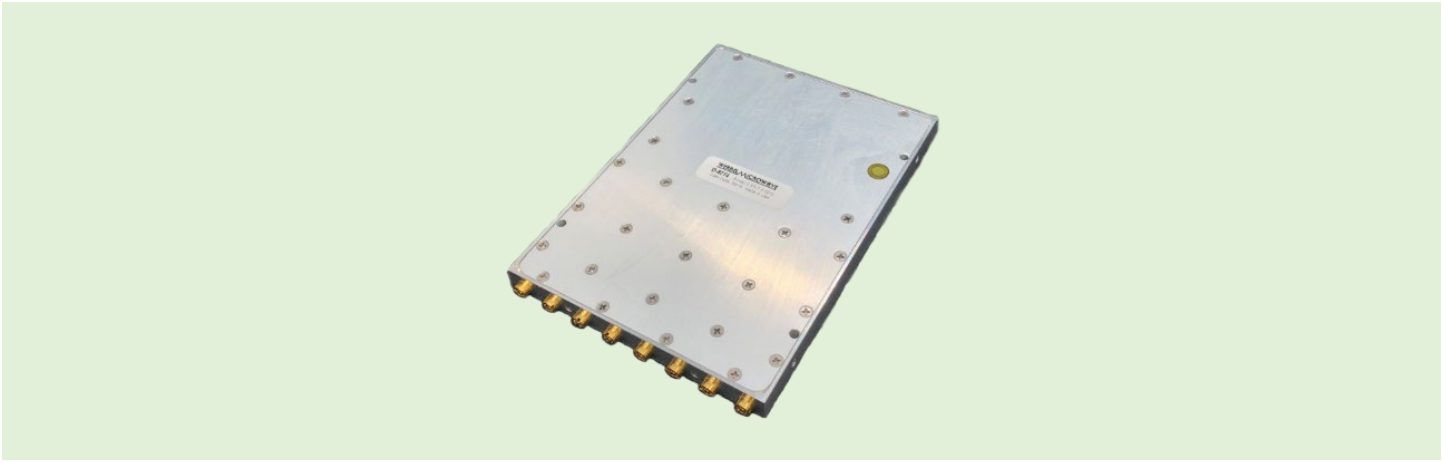
Power Divider, 0.55-7.4GHz, 8-way, SMP Male

8-way SMA Power Divider from 550 MHz to 7.4 GHz

WM8PD-0.55-7.4-SMP



The Werbel Microwave **WM8PD-0.55-7.4-SMP** is a broadband 8-way Wilkinson power divider covering 550 MHz to 7.4 GHz, designed for compact, high-frequency distribution using SMP male interfaces. The SMP connectors allow for high-density packaging and reliable performance in applications where space constraints or blind-mate requirements make traditional connectors impractical.

This model features a recessed cover design to protect the internal structure and improve mechanical durability in demanding environments. The recessed cover also reduces RF leakage. It delivers solid amplitude and phase balance with good isolation across the band, making it well suited for test systems, phased arrays, and multi-channel RF distribution.

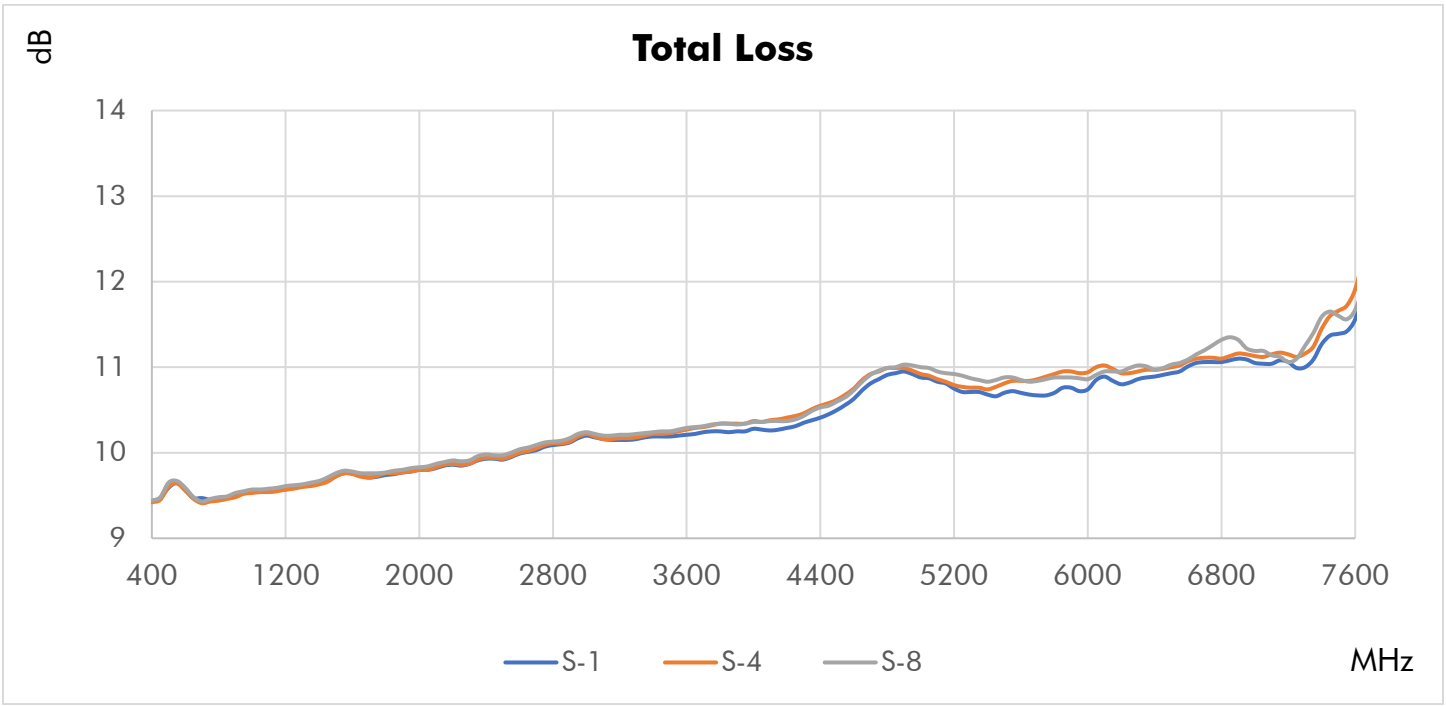
Proudly designed and manufactured in the USA, this divider reflects Werbel Microwave's focus on practical performance, rugged construction, and honest specifications. Built for real-world use, it prioritizes repeatability, reliability, and ease of integration over theoretical edge-case performance.

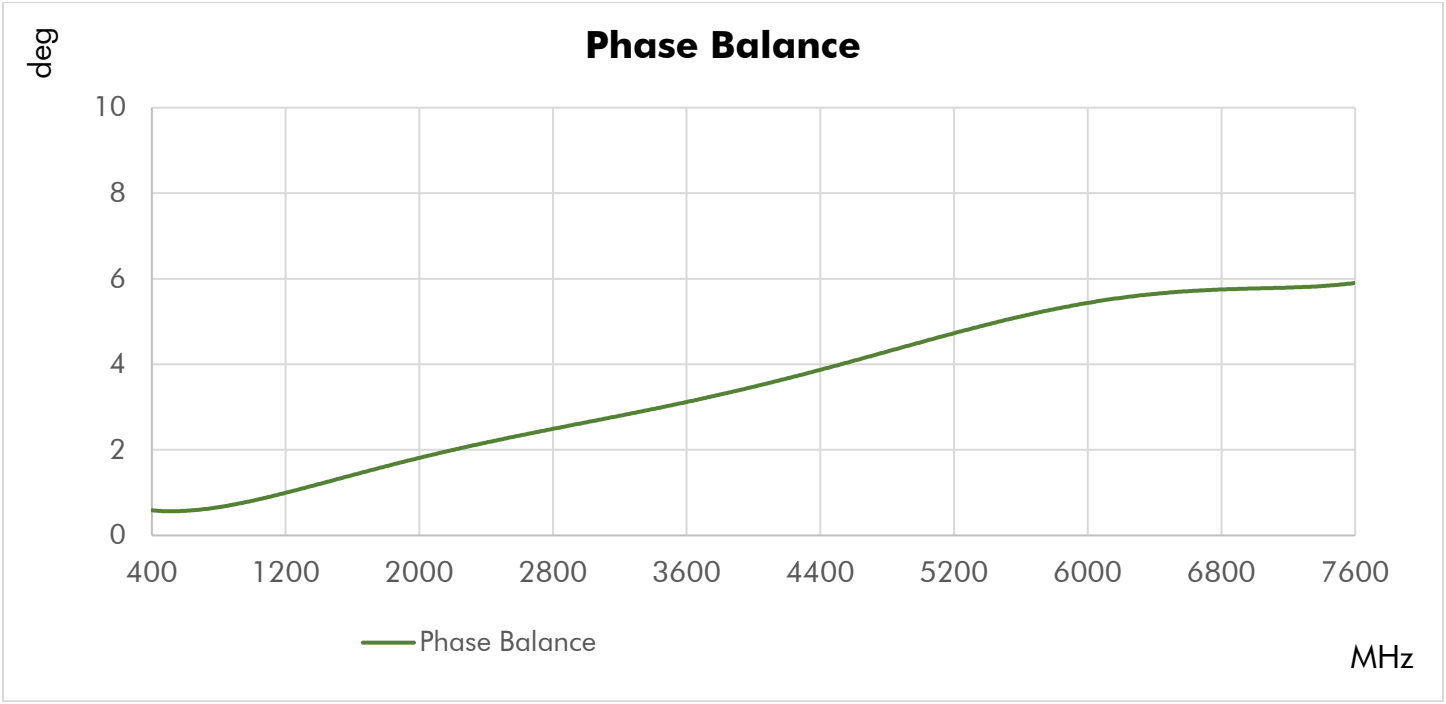
Parameter	Min.	Typ.	Max.	Unit
Frequency Range	550		7400	MHz
Impedance		50		Ω
Return Loss (Port S)	11	16		dB, min.
Return Loss (Port 1-8)	13	20		dB, min.
Insertion Loss above 9.03 dB splitting loss		2.4	3.6	dB, max.
Isolation	17	20		dB, min.
Amplitude Unbalance (±)[1]		0.3	0.8	dB, max.
Phase Unbalance (±)[1]		4	8	Degree, max.
Input Power (CW)[2]			30	W, max.
Max Power as Combiner (under mismatch conditions)[2]		0.25		W/port, max.
DC Current		0.68A (85mA/port) max.		

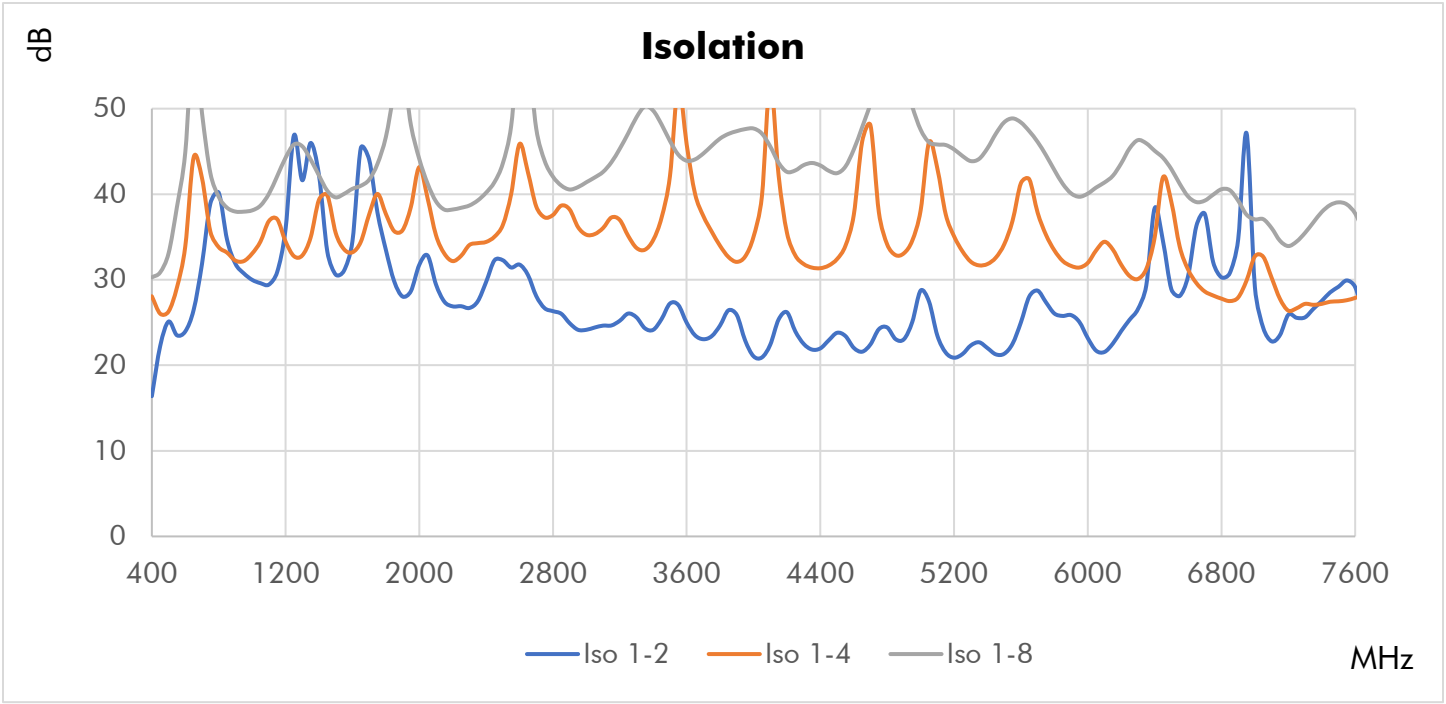
Connector Interface	SMP-Male	RoHS Status[4]	RoHS3 Compliant
Operating Temperature[3]	-10 to +65 °C	REACH Status[4]	REACH Unaffected
Storage Temperature	-55 to +100 °C	Enclosure Material	Aluminum
Nominal Weight	567 g (20 oz)	Connectors Material	Brass, Gold Plated
Operating Humidity	10-90% (non-condensing)	Contacts Material	Beryllium Copper, Gold Plated
Operating Environment	Indoor Use Only	Insulators Material	Virgin PTFE
HTSUS Code	8548.00.0000	Finish	Clear Chemical Film
ECCN	EAR99	Country of Origin	United States of America

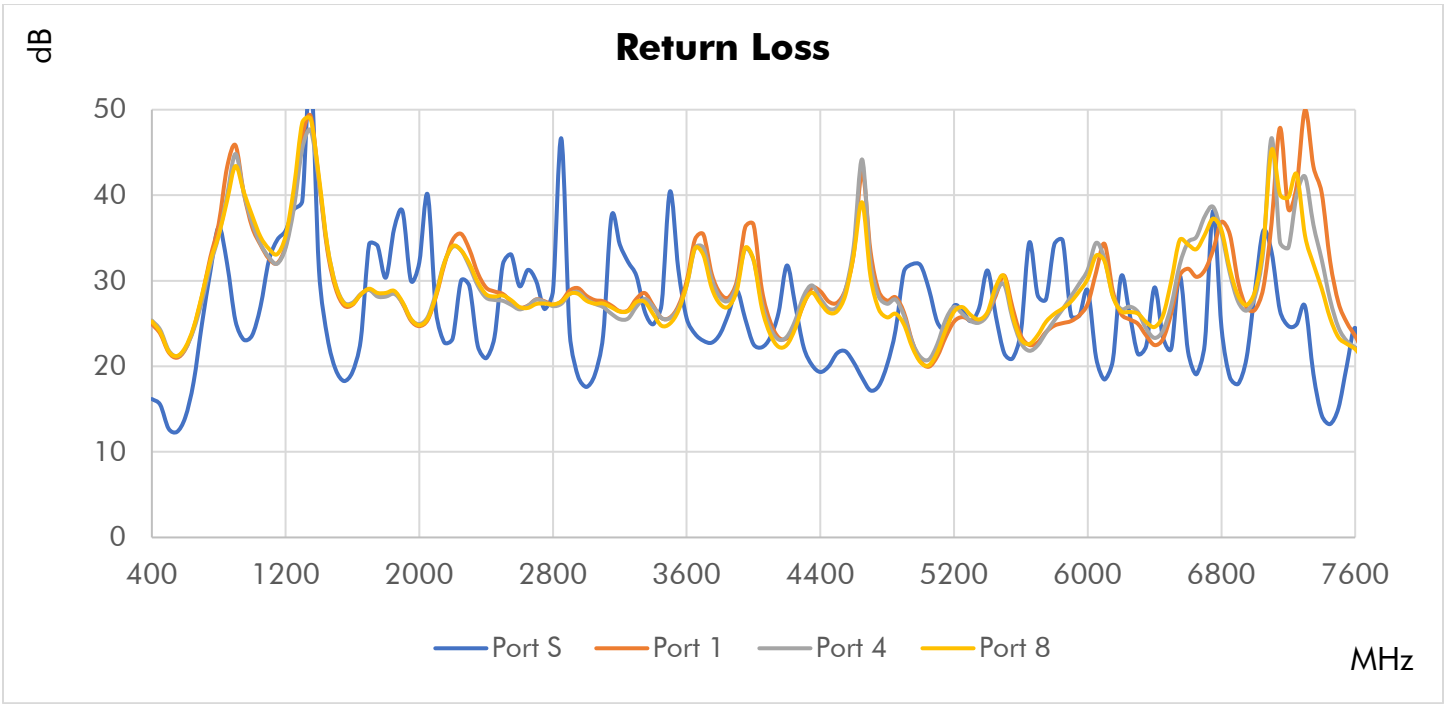
1. With reference to average.
2. All output ports should be terminated in a 50-ohm load with 1.2:1 max VSWR.
3. Electrical specifications are tested at +25 °C.
4. To the best of our knowledge at the time of publication.

Typical Performance at +25 °C




Phase Balance
deg
10
8
6
4
2
0
400
1200
2000
2800
3600
4400
5200
6000
6800
7600
Phase Balance
MHz

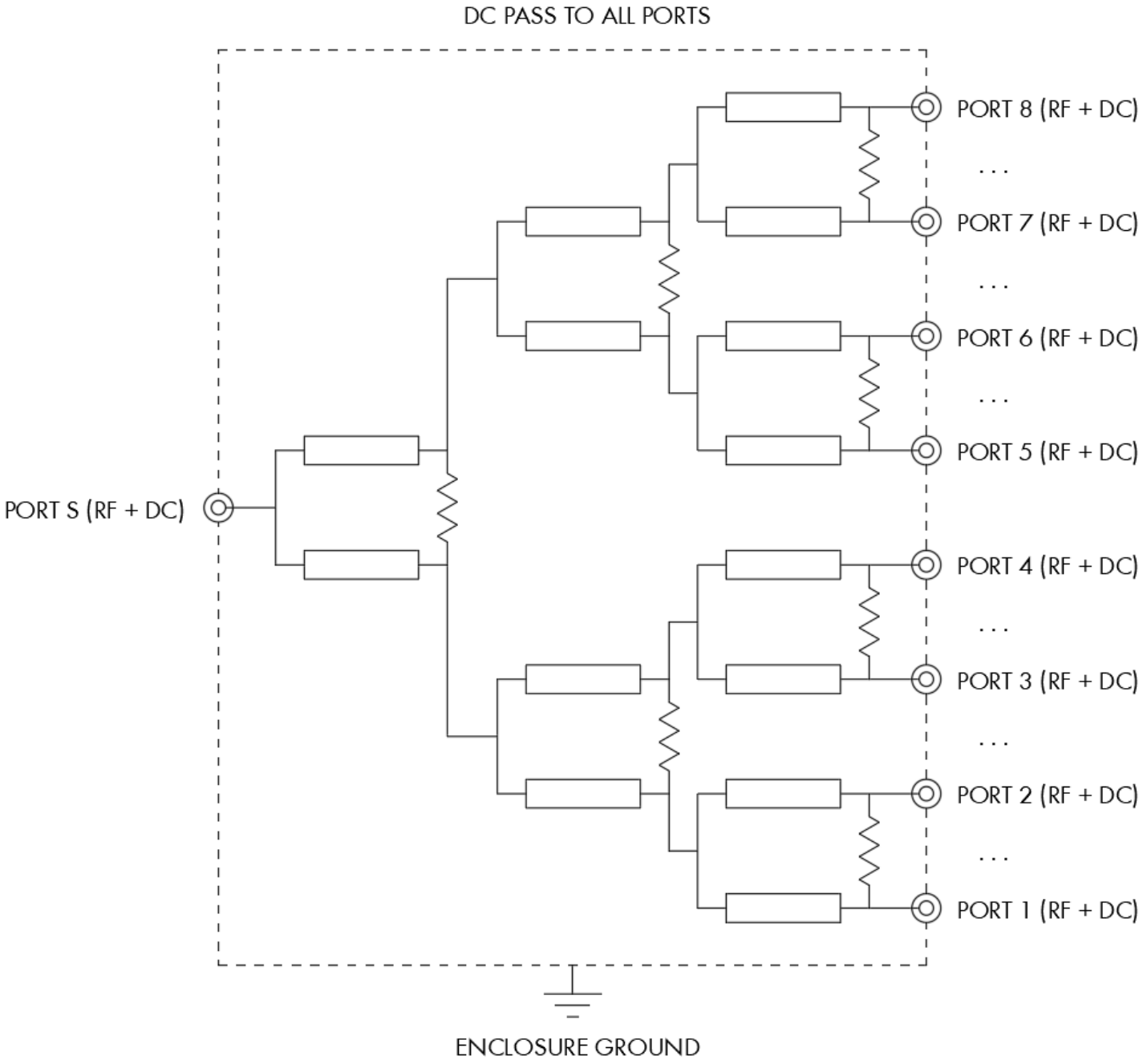

Isolation
dB
50
40
30
20
10
0
400
1200
2000
2800
3600
4400
5200
6000
6800
7600
Iso 1-2
Iso 1-4
Iso 1-8
MHz


Return Loss
dB
50
40
30
20
10
0
400
1200
2000
2800
3600
4400
5200
6000
6800
7600
Port S
Port 1
Port 4
Port 8
MHz

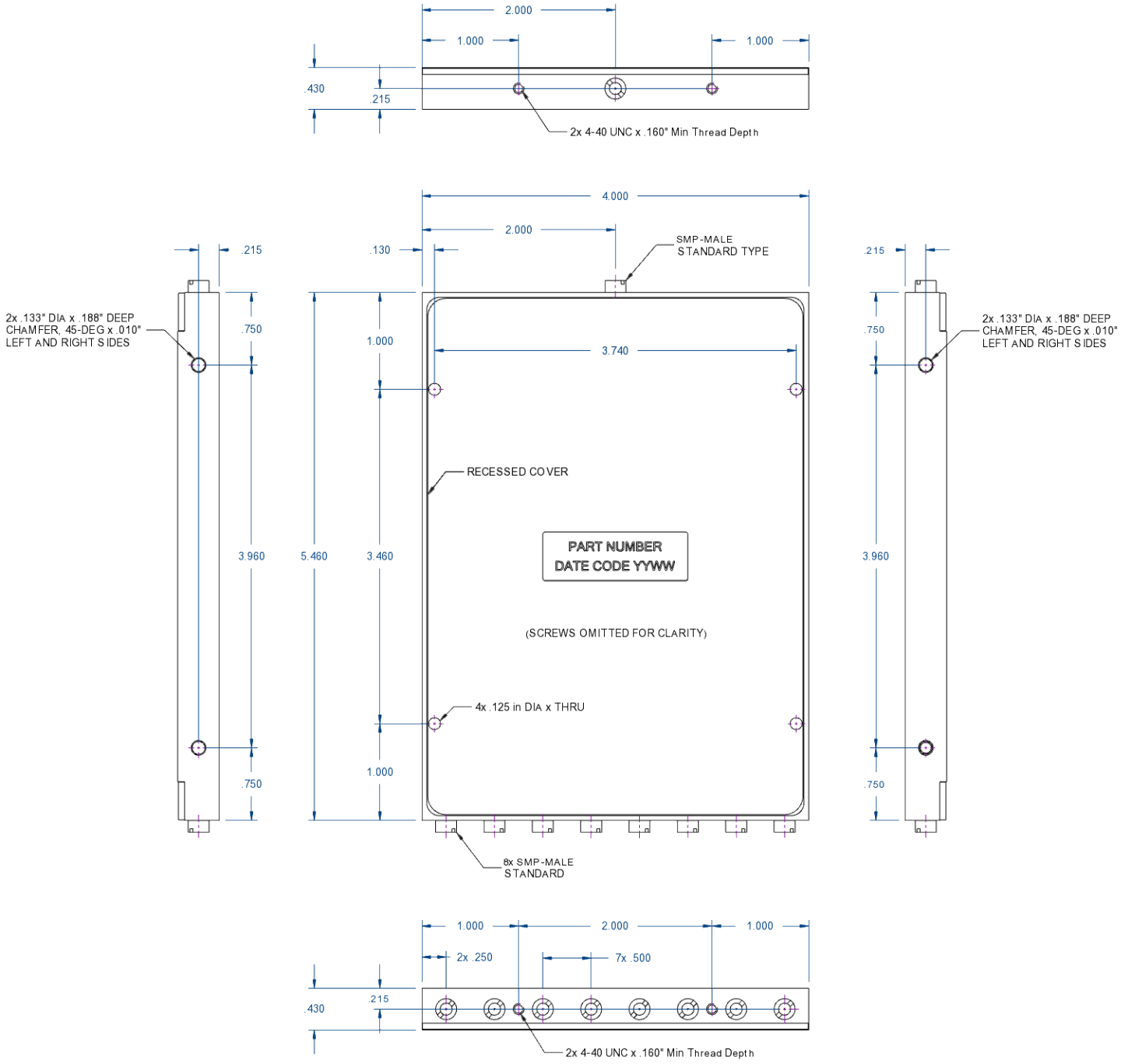
Typical Performance Data

Frequency (MHz)	Return Loss (dB)			Total Loss (dB)		Isolation (dB)		
	Port S	Port 1	Port 5	S-1	S-5	1-2	1-4	1-8
400	16.18	24.94	25.06	9.43	9.42	16.39	28.07	30.28
450	15.51	23.82	23.87	9.47	9.46	22.27	26.03	30.87
500	12.72	21.66	21.78	9.59	9.62	25.11	26.29	33.09
550	12.34	21.01	21.12	9.65	9.65	23.51	29.09	38.50
600	14.04	21.98	22.16	9.56	9.57	23.96	33.91	44.90
650	18.17	24.46	24.69	9.47	9.48	26.48	44.30	58.44
700	25.00	28.21	28.76	9.47	9.43	31.85	41.88	49.48
750	31.08	32.75	32.90	9.45	9.45	38.91	35.63	42.47
800	36.30	36.65	36.58	9.46	9.46	40.18	33.81	39.70
850	32.02	43.27	41.80	9.48	9.48	34.68	33.17	38.42
900	25.33	45.85	43.18	9.51	9.52	31.87	32.24	37.97
950	23.11	40.26	39.04	9.53	9.54	30.75	32.18	37.96
1000	23.62	36.28	35.70	9.55	9.56	29.99	33.06	38.11
1500	19.61	29.10	29.27	9.73	9.73	30.60	35.47	39.63
2000	32.12	24.70	25.05	9.80	9.81	31.74	43.17	44.12
2500	31.91	28.46	28.60	9.92	9.93	32.28	36.40	43.61
3000	17.59	28.25	28.70	10.20	10.19	24.15	35.26	41.40
3500	40.43	25.70	26.11	10.19	10.19	27.22	42.11	46.22
4000	22.58	36.57	33.74	10.28	10.30	21.06	35.02	47.68
4500	21.53	27.43	25.57	10.50	10.56	23.80	32.42	42.46
5000	31.80	20.61	20.61	10.88	10.94	28.74	38.11	47.54
5500	21.54	30.61	30.21	10.70	10.99	21.35	34.14	48.41
6000	28.86	27.32	28.12	10.74	11.10	23.18	31.97	40.07
6500	22.11	26.25	26.16	10.93	10.99	28.90	39.10	42.94
7000	28.77	26.60	25.86	11.05	11.14	29.15	32.73	37.06
7500	15.12	27.44	24.55	11.39	11.60	29.18	27.48	39.05
8000	7.23	11.95	11.74	12.79	12.88	16.63	22.17	37.52

Simplified Electrical Schematic



Outline Dimensions



Outline drawing: OL-8774-21-M1
Dimensions are in inches, [mm] shown for convenience.
Tolerances on 2-pl decimals: ±.03. 3-pl decimals: ± .015.

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